IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: John N. HATLEBERG	Confirmation No. 4007
Application No: 10/679,292	Group Art Unit: 3643
Filing Date: October 7, 2003	Examiner: Stuart L. Hendrickson
For: SYNTHETIC DIAMONDS PREPARED FROM ROSES	Atty. Docket No.: 81715-100

APPEAL BRIEF FEE TRANSMITTAL

Mail Stop Appeal Brief-Patents
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P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

The fee for submitting the enclosed Appeal Brief of even date herewith is believed to be $255.00 (small entity) pursuant to 37 C.F.R. § 1.17(c). Please charge all required fees to Winston & Strawn LLP deposit account no. 50-1814.

Respectfully submitted,

10/1/07
Date

(Reg. No. 57,073)
for: Allan A. Fanucci (Reg. No. 30,256)

WINSTON & STRAWN LLP
Customer No. 28765

212-294-3311

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: John N. HATLEBERG	Confirmation No.: 4007
Application No: 10/679,292	Group Art Unit: 1754
Filing Date: October 7, 2003	Examiner: Stuart L. Hendrickson
For: SYNTHETIC DIAMONDS PREPARED FROM ROSES	Atty. Docket No.: 81715-100

APPEAL BRIEF

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Alexandria, VA 22313-1450

Sir:

Appellant appeals to the Board of Patent Appeals and Interferences (the "Board") from the decision of the Examiner mailed March 20, 2007, rejecting claims 1-3, 5-13, 15, 17, and 19-23.

1. REAL PARTY IN INTEREST

The real party in interest is John N. Hatleberg, having an address of 1016 Fifth Avenue, New York, NY 10028, the inventor and owner of the entire right, title, and interest in the invention described and claimed in the above-identified patent application.

2. RELATED APPEALS AND INTERFERENCES

Appellant and his legal representatives are not aware of any appeal or interference that directly affects, will be directly affected by, or will have a bearing on the Board's decision in this appeal.

3. STATUS OF CLAIMS

Claims 1-20 were submitted upon filing of application 10/679,292 on October 7, 2003. In an Office Action dated September 27, 2006, claims 3-7, 15-17, 19, and 20 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Claims 1-20 were rejected under 35 U.S.C. § 102(e) or, in the alternative, 35 U.S.C. § 103(a), over U.S. Publication No. 2003/0017932 to VandenBiesen et al. ("VandenBiesen"), and under 35 U.S.C. § 103(a) over U.S. Patent No. 6,030,596 to Vilella Jirau ("Vilella Jirau"), taken with Appellant's admissions. Claims 1, 2, 4, and 8-15 were rejected under 35 U.S.C. § 102(b) or, in the alternative, 35 U.S.C. § 103(a) over Vilella Jirau. In an Amendment filed December 20, 2006, claims 4, 14, 16, and 18 were cancelled, claims 1-3, 5, 6, 15, 17, and 19 were amended, and claims 21-23 were added.

In a Final Office Action dated March 20, 2007, claims 1-3, 5-13, 15, 17, and 19-23 were rejected under 35 U.S.C. § 103(a) over VandenBiesen and Vilella Jirau, both taken with Appellant's admissions. A Response to the Final Office Action was filed on July 19, 2007, along with Declarations under 37 C.F.R. § 1.132 of John King dated July 10, 2007 (the "King Declaration") and Alex Grizenko dated July 17, 2007 (the "Grizenko Declaration").

An Advisory Action was mailed July 24, 2007, indicating that the response to the Final Office Action was not deemed to place the application in condition for allowance, and that the Declarations under 37 C.F.R. § 1.132 were not persuasive.

Claims 7-13 and 20 have been twice rejected in their present form.

Claims 1-3, 5-13, 15, 17, and 19-23 are presented in Appendix A.

4. STATUS OF AMENDMENTS

Claims 4, 14, 16, and 18 have been cancelled, and claims 1-3, 5, 6, 15, 17, and 19 have been amended.

In an Amendment filed December 20, 2006, claims 4, 14, 16, and 18 were cancelled, claims 1-3, 5, 6, 15, 17, and 19 were amended, and claims 21-23 were added.

A Response to Final Office Action was filed on July 19, 2007, making no amendments and including the King and Grizenko Declarations in support of Appellant's position.

5. SUMMARY OF CLAIMED SUBJECT MATTER

The above-identified application is directed to methods of making a more permanent remembrance from a gift that includes organic plant material, by converting the organic material of the gift into carbon or a carbon-containing compound and then converting the carbon or carbon-containing compound to form a gem quality synthetic diamond. The synthetic diamond is formed with a color that is the same as that of the gift. The use of plant material as a source of a gem quality synthetic diamond is advantageous in that it adds a direct and symbolic link between the gift and the final diamond product that was heretofore not present in the art. By combining the gift of organic plant material and diamond in this novel and creative way, the present methods significantly enhance the importance, significance, and desirability of the synthetic diamond. The present methods thus allow a gift that has ephemeral beauty and symbolizes the feelings of a gift-giver toward a recipient to be converted into a more permanent or eternal manifestation that symbolizes the feelings.

Claim 1 defines a method of making a more permanent remembrance from a gift, which comprises selecting a gift that includes organic plant material, wherein the gift has ephemeral beauty and symbolizes the feelings of a gift-giver toward a recipient (Specification, page 11, lines 9-13; page 13, lines 7-20), and transforming the ephemeral beauty of the gift to a more permanent or eternal manifestation that symbolizes the feelings of the gift-giver toward the recipient (Specification, page 11, lines 9-13). The method provides such transformation by initially converting the organic material of the gift into carbon or a carbon-containing compound that is suitable for preparing a synthetic diamond (Specification, page 13, line 31 to page 14, line 2), and then converting the carbon or carbon-containing compound under suitable pressure and temperature conditions to form a gem quality synthetic diamond (Specification, page 14, lines 3-4 and 11-15). Further, the synthetic diamond is formed with a color that is the same as that of the gift (Specification, page 15, lines 31-33).

Claim 15 defines a method of making a more permanent remembrance from a gift, which comprises selecting a gift of organic plant material having ephemeral beauty and that symbolizes the feelings of a gift-giver toward a recipient (Specification, page 11, lines 9-13; page 13, lines 7-20) and transforming the ephemeral beauty of the organic plant material to a more permanent or eternal manifestation of such beauty as well as the feelings of the gift-giver toward the recipient (Specification, page 11, lines 9-13). The method provides such transformation by initially converting the organic plant material of the gift into carbon or a carbon-containing compound that is suitable for preparing a synthetic diamond (Specification, page 13, line 31 to page 14, line 2), and then converting the carbon or carbon-containing compound under suitable pressure and temperature conditions to form a gem quality synthetic diamond (Specification, page 14, lines 3-4 and 11-15) as a combined gift of the organic plant material and diamond (Specification, page 13, lines 25-28). Claim 15 further recites that the organic plant material has a perceivable color and is a plant, bush, or tree or a fruit or vegetable produced thereby (Specification, page 13, lines 16-18), and that the synthetic diamond is formed with a color that is the same as that of the gift (Specification, page 15, lines 31-33).

Claim 17 defines a method of making a more permanent remembrance from a gift, which comprises selecting a gift of a flower or flowers having a color and ephemeral beauty and that symbolizes the feelings of a gift-giver toward a recipient (Specification, page 11, lines 9-13 and 25; page 13, lines 7-12) and transforming the ephemeral beauty of the flower(s) to a more permanent or eternal manifestation of such beauty as well as the feelings of the gift-giver toward the recipient (Specification, page 11, lines 9-13). The method provides such transformation by initially converting the flower(s) into carbon or a carbon-containing compound that is suitable for preparing a synthetic diamond (Specification, page 13, line 31 to page 14, line 2), and then converting the carbon or carbon-containing compound under suitable pressure and temperature conditions to form a gem quality synthetic diamond (Specification, page 14, lines 3-4 and 11-15). The synthetic diamond is formed with a color that is the same as that of the gift (Specification, page 15, lines 31-33).

6. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1-3, 5-13, 15, 17, and 19-23 are rejected under 35 U.S.C. § 103(a) as obvious over VandenBiesen, taken with Appellant's admissions. Claims 1-3, 5-13, 15, 17, and 19-23 are rejected under 35 U.S.C. § 103(a) as obvious over Vilella Jirau, taken with Appellant's admissions.

7. ARGUMENT

The Examiner's rejections of the pending claims are in error because the claimed methods are neither disclosed nor suggested by the disclosures of VandenBiesen or Vilella Jirau, and the present claims are therefore not rendered obvious by these references. For the reasons below, Appellant respectfully requests that the Examiner's obviousness rejections be reversed, and that claims 1-3, 5-13, 15, 17, and 19-23 be allowed.

A. The Claims Are Not Obvious Over VandenBiesen

VandenBiesen is directed to a synthetic gem that comprises elements recovered from human or animal remains and the process for making such synthetic gem.[1] The process comprises cremating human or animal remains to produce carbon in a particulate and gaseous form.[2] The carbon is collected or filtered using a conventional collection or filtering technique, and the carbon and other elements are then purified and graphitized.[3] The gems are then created using conventional sublimation techniques.[4] By providing a synthetic gem synthesized from human or animal remains, VandenBiesen seeks to "eliminate[] the disadvantages of natural gems which cannot be traced to any specific vertebrate."[5] According to VandenBiesen, a synthetic gem produced from a carbon source that cannot be traced to any specific vertebrate has disadvantages in that it would not be used as "a memorial gem in a memorial or funeral service for a deceased human or animal"; "a keepsake that preserves the remains and memories of the deceased for bereaved family, friends, loved ones, lovers, or acquaintances"; "a symbol of the bond between two individuals who wish to express their commitment by providing ingredients to a single synthetic gem"; and "a unique collectable gem celebrating a famous person."[6]

Thus, in contrast to the present methods, VandenBiesen is directed to the use of human or animal remains as the starting material of the synthetic gem. As would have been apparent to a person having ordinary skill in the art, human or animal remains is significantly different from organic plant material used in the claimed methods. Being of an animal source, it is a completely different type of material from organic plant material and has different properties that require different processing. For example, as is known in the art, cremation of human or animal remains must be conducted under a carefully controlled process in order to capture the necessary carbon to produce synthetic gems and to avoid contaminating one human or animal with another. In addition, the synthetic diamond produced from human or animal remains is a different product from that produced from organic plant material, and has different trace elements, such as silicon, or "signatures" that are specific to diamonds produced from organic plant sources. Such trace elements can be tested to determine the starting material of a synthetic diamond. Thus, the present methods are also distinguished from the prior art by the trace elements in the synthesized product. In this regard, the Examiner's statement that the diamonds of this application "are not in fact made directly from plant material" is incorrect.[7] Since organic plant material is used as the starting material, a person of ordinary skill in the art would understand that the diamonds are made directly from organic plant material. The fact that the diamonds includes certain trace elements that are unique to organic plant sources shows that the diamonds are in fact directly made from organic plant material. Even if techniques for making synthetic diamonds are known, the present methods of using organic plant material as the starting material for synthesizing diamonds are nowhere disclosed or suggested in the prior art of record.

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[1] *See* VandenBiesen at ¶ [0018].

[2] *See id.* at ¶ [0019].

[3] *See id.*

[4] *See id.*

[5] *Id.* at ¶ [0016].

[6] *Id.* at ¶ [0007].

Because of the fundamental differences in the nature of the starting material, the present methods also have different uses and utility from those of VandenBiesen. In particular, due to its specificity and highly restricted access, VandenBiesen's starting material, i.e., particular human and animal remains to be memorialized, the synthesizing process of VandenBiesen can be practiced only with a narrow class of materials and therefore has only a limited use. In contrast, the starting material for the present methods, which can be practiced with essentially any chosen organic plant material, is abundant and universally available, and has universally accepted appeal. The synthetic gem produced by the VandenBiesen process has only a narrower, personal significance specific to the human or animal remains used, and does not have the versatility or universal symbolism and appeal of a synthetic diamond produced according to the claimed methods. In contrast to VandenBiesen, any desired organic plant material can be chosen as the starting material in the present methods, based on any desired factors, including the recipient's taste or preference, the color of the organic plant, and the symbolism associated with the organic plant. Also, while the synthetic gems of VandenBiesen, as memorials, are necessarily associated with the past, morbidity, and perhaps sadness, the diamonds of the present methods are able to convey fundamentally different emotions representative of life, hope and the future.

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[7] *See* Advisory Action at p. 2.

In addition, as a person having ordinary skill in the art would have appreciated at the filing of this application, human or animal remains of VandenBiesen cannot be a gift that has ephemeral beauty and symbolizes the feelings of a gift-giver toward a recipient as recited in the claims. Certainly, one would not consider human or animal remains a gift. Likewise, because of the nature of human or animal remains, the synthetic gem-making process of VandenBiesen does not provide a method of making a more permanent remembrance from a gift that involves transforming the ephemeral beauty of the gift to a more permanent or eternal manifestation that symbolize the feelings of the gift-giver toward the recipient as recited in the claims.

In contrast, by using a gift that includes organic plant material as a starting material to produce a synthetic diamond that represents a more permanent remembrance of the gift, the present methods provide a link between the starting material and the synthetic diamond that is absent from VandenBiesen. In this way, the methods directly combine the gift of organic plant material with the gift of a synthetic diamond produced therefrom.

By using a gift as a starting material and therefore providing a direct link between the gift and the final synthetic diamond product, the present methods provide unexpected benefits over the prior art. Not only do present methods provide a link between a synthetic diamond and organic plant, which was previously not recognized or practiced in the art,[8] but they also provide "a link between the symbolism of a gift such as roses with the permanence of a synthetic diamond," and therefore complete "the missing conceptual link" that is needed to bring the natural diamond's inherent and integral property of romance to synthetic diamonds.[9] As such, the present methods allow combining the significance and symbolism of a gift of organic plant, such as roses, with the significance and symbolism of a gift of a diamond.[10] The similarity between the symbolism of the starting material and the symbolism of the resultant diamonds, and the synergy created by their combined symbolism, are both absent from VandenBiesen.

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[8] *See* the King Declaration at ¶ 4.

[9] The King Declaration at ¶ 4.

The present methods therefore achieve the heretofore unrecognized link between diamond and organic plant, and unexpectedly and advantageously enable synthetic diamonds to convey the symbolism of love and romance that conventionally has been associated only with natural diamonds. In this way, the methods enhance the significance and desirability of synthetic diamonds by attributing a meaning to synthetic diamonds in a way that was not previously recognized or practiced in the art, including VandenBiesen. Such combination of the symbolism of the gift and the permanent manifestation of the gift in the diamond is a true improvement that is thought to be significant and exciting by one of ordinary skill in the art,[11] and further distinguishes the claims from VandenBiesen.

Accordingly, the present methods and the organic plant material used in the methods are fundamentally different from, and patentably distinguished from, the process of VandenBiesen and its use of human or animal remains.

In this regard, the Examiner's statement that "using a plant material rather than an animal material is an obvious expedient because both contain predominantly carbon atoms and hence can serve as sources for graphite/diamond"[12] is incorrect. As explained above, not only is an animal material a completely different type of material from a plant material and produces different trace elements in the synthetic diamond product, but it does not provide a link between the symbolism of a gift and a synthetic diamond as provided by the presents methods. In fact, VandenBiesen actually teaches away from the use of organic plant material of the present methods by teaching the use of a particular type of material, i.e., human or animal remains, for a particular purpose, i.e., memorializing the human or animal. In view of VandenBiesen's teaching, one of ordinary skill in the art would not have been motivated to use organic plant material in place of the human or animal remains of VandenBiesen, and the Examiner's rejection of the claims over VandenBiesen appears to have been based on an improper hindsight.

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[10] *See* the Grizenko Declaration at ¶ 6.

[11] *See id.* at ¶¶ 5-6.

[12] Final Office Action at p. 2.

With respect to the claim feature that the synthetic diamond is formed with a color that is the same as that of the gift, the Examiner alleges that using known techniques to make the desired color is an obvious expedient to produce the desired product.[13] Although the knowledge of coloring a synthetic diamond exists, however, there is no disclosure or suggestion in the art of record to make a diamond in the color of the starting material as in the present claims.[14] This feature imparts a greater significance to the diamond by creating a further visual connection between the gift and the diamond and enabling more complete remembrance of the gift by the recipient. For example, the symbolism of a red diamond as representing a gift of red roses creates further importance and significance to the diamond.[15] The feature also enables the recipient to select the color of the diamond based on the selected color of the organic plant contemplated as the gift. Such direct visual connection between the starting material and the resulting synthetic diamond has never been recognized in the art prior to the filing of this application.[16]

In view of the above, Appellant respectfully submits that the claims are not obvious over VandenBiesen.

B. The Claims Are Not Obvious Over Vilella Jirau

Vilella Jirau is directed to a method for synthesizing industrial quality diamonds by heating a heterogeneous dispersion of carbon made by pyrolysis of organic material and copper metal under a pressure of 100,000 psi, under which copper behaves like a solvent that favors the crystallization of carbon into the cubic system.[17]

As a person of ordinary skill in the art would have known at filing of this application, Vilella Jirau relates to the use of copper in the synthesis of industrial quality diamonds, and not to the synthesis of gem quality synthetic diamonds as recited in the claims.[18] Indeed, a person of ordinary skill in the art would have understood, based on Vilella Jirau's process parameters, including temperature, pressure, and time of manufacture, that the product produced in Vilella Jirau is small and discolored industrial quality particles that cannot be gem quality diamond. As is known in the art, industrial quality diamonds are a different class of products from gem quality diamonds. Specifically, industrial quality diamonds are low quality stones that are suitable only for industrial uses, such as abrasive material, while gem quality diamonds exhibit much higher quality as shown by increased clarity, desirability of color, and large crystal size used in jewelry applications.[19] Thus, the overall processes of Vilella Jirau and the claims necessarily and significantly differ, as relating to different classes of diamonds with essentially different qualities. The mere fact that both processes involve pyrolysis of a carbon source does not render the claims obvious over Vilella Jirau. To illustrate the well-known differences between industrial quality diamonds and gem quality diamonds, a photograph each of gem quality diamonds produced according to the claims, using roses as the starting material, and of industrial quality diamonds according to Vilella Jirau is attached. As stated in the attached Declarations under 37 C.F.R. § 1.132 of John Hatleberg (the "Hatleberg Declaration"), the sample of the industrial quality diamonds depicted in the photograph is an accurate reproduction of the product that would be produced from the Vilella Jirau process.

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[13] Final Office Action at p. 2.

[14] *See* the Grizenko Declaration at ¶ 9.

[15] *See id.*

[16] *See id.*

[17] *See* Vilella Jirau at col. 1, lines 46-56.

In this regard, the Examiner's statement that "[t]he phrase 'gem quality' is subjective"[20] is incorrect. As explained above, the terms "industrial quality diamonds" and "gem quality diamonds" have well-established meaning in the art and are not subjective standards.

Furthermore, Vilella Jirau is irrelevant to the present methods of making a more permanent remembrance from a gift that includes organic plant material by forming a gem quality synthetic diamond. In Vilella Jirau, which merely relates to a certain process for synthesizing industrial quality diamonds, there is absolutely no connection between the starting material and the final diamond product that is present in the present methods. Because Vilella Jirau does not disclose or suggest the connection between the starting material and the final product, or that a particular starting material can yield a particular diamond product, the choice of organic carbon source material in Vilella Jirau is irrelevant. In contrast, as explained above, the present methods realize the previously unrecognized connection between the starting material and the resultant diamond product by providing a link between a gift of organic plant material that has ephemeral beauty and symbolizes the feelings of the gift-giver toward the recipient and the synthetic gem quality diamond formed therefrom, which makes a more permanent remembrance from the gift.

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[18] *See* the Grizenko Declaration at ¶ 8.

[19] *See* www.costellos.com.au/diamonds/mining.html (categorizing diamonds into "gem quality," "near-gem quality," and "industrial quality" diamonds) (copy attached hereto in Appendix B); Grizenko Declaration at ¶ 8.

[20] Final Office Action at p. 3.

In addition, the present claims recite that the synthetic diamond is formed with a color that is the same as that of the gift. This feature provides further advantages such as providing an additional, visual connection between the gift and the diamond and enabling the recipient to select the color of the diamond based on the selected color of the organic plant contemplated as the gift. Vilella Jirau has no such disclosure or suggestion. Indeed, there would not have been any need for such feature in Vilella Jirau, since it is directed to industrial quality diamonds rather than gem quality diamonds. Not only is there no need for such color attribute in Vilella Jirau, but any such color feature, even if used in Vilella Jirau, would not provide the kind of surprising benefits provided by the present methods.

In this regard, Appellant respectfully submits that, although the basic knowledge exits for making synthetic diamonds from graphitized material and for making synthetic diamonds with a particular color, there is no disclosure or suggestion in Vilella Jirau of using a gift of organic plant material as starting material for making a gem quality synthetic diamond that embodies the gift and has a color representative of the gift, as recited in the claims.

Accordingly, Appellant respectfully maintains that the claims are not obvious over Vilella Jirau.

8. CONCLUSION

In view of the preceding discussion, Appellant respectfully requests that the rejections of claims 1-3, 5-13, 15, 17, and 19-23 be reversed and that these claims be allowed.

Respectfully submitted,

Allan A. Fanucci

10/1/07

Date

Allan A. Fanucci (Reg. No. 30,256)

WINSTON & STRAWN LLP
Customer No. 28765

212-294-3311

Appendix A -- Claims Appendix

The claims on appeal are:

1. A method of making a more permanent remembrance from a gift which comprises: selecting a gift that includes organic plant material, wherein the gift has ephemeral beauty and symbolizes the feelings of a gift-giver toward a recipient; transforming the ephemeral beauty of the gift to a more permanent or eternal manifestation that symbolizes the feelings of the gift-giver toward the recipient by initially converting the organic material of the gift into carbon or a carbon-containing compound that is suitable for preparing a synthetic diamond, and then converting the carbon or carbon-containing compound under suitable pressure and temperature conditions to form a gem quality synthetic diamond; wherein the synthetic diamond is formed with a color that is the same as that of the gift.

2. The method of claim 1, wherein the carbon is graphite.

3. The method of claim 1, wherein the carbon-containing compound is methane.

4. (Cancelled)

5. The method of claim 1, wherein the organic plant material is an edible or non-edible plant, bush, or tree or a fruit or vegetable produced thereby.

6. The method of claim 5, wherein the organic plant material is a flower and the color of the synthetic diamond is the same as that of the flower.

7. The method of claim 6, wherein the flower is a rose.

8. The method of claim 1, wherein the gift is a proposed gift and only the diamond is bestowed upon the recipient.

9. The method of claim 1, wherein the gift is first given to the recipient and the organic material of the gift is later converted into the synthetic diamond.

10. The method of claim 1, wherein both the gift and the synthetic diamond symbolize feelings of love from the gift-giver toward the recipient.

11. The method of claim 1, wherein the synthetic diamond has a white, red, pink, yellow or blue color.

12. The method of claim 1, which further comprises bestowing the synthetic diamond on the recipient to signify an important occasion.

13. The method of claim 12, wherein the occasion is a proposal of marriage, an anniversary, a holiday, or the recipient's birthday.

14. (Cancelled)

15. A method of making a more permanent remembrance from a gift which comprises: selecting a gift of organic plant material having ephemeral beauty and that symbolizes the feelings of a gift-giver toward a recipient, transforming the ephemeral beauty of the organic plant material to a more permanent or eternal manifestation of such beauty as well as the feelings of the gift-giver toward the recipient by initially converting the organic plant material of the gift into carbon or a carbon-containing compound that is suitable for preparing a synthetic diamond, and then converting the carbon or carbon-containing compound under suitable pressure and temperature conditions to form a gem quality synthetic diamond as a combined gift of the organic plant material and diamond; wherein the organic plant material has a perceivable color and is a plant, bush, or tree or a fruit or vegetable produced thereby, and the synthetic diamond is formed with a color that is the same as that of the gift.

16. (Cancelled)

17. A method of making a more permanent remembrance from a gift which comprises: selecting a gift of a flower or flowers having a color and ephemeral beauty and that symbolizes the feelings of a gift-giver toward a recipient; transforming the ephemeral beauty of the flower(s) to a more permanent or eternal manifestation of such beauty as well as the feelings of the gift-giver toward the recipient by initially converting the flower(s) into carbon or a carbon-containing compound that is suitable for preparing a synthetic diamond, and then converting the carbon or carbon-containing compound under suitable pressure and temperature conditions to form a gem quality synthetic diamond; wherein the synthetic diamond is formed with a color that is the same as that of the gift.

18. (Cancelled)

19. The method of claim 17, wherein the synthetic diamond has a white, red, pink, yellow or blue color.

20. The method of claim 19, wherein the flower(s) comprises rose(s).

21. The method of claim 15, wherein the synthetic diamond has a white, red, pink, yellow or blue color.

22. The method of claim 21, wherein the organic plant material comprises a flower or flowers.

23. The method of claim 22, wherein the flower(s) comprises rose(s).

Appendix B -- Evidence Appendix

1. **The King Declaration**
   - By John King
   - Signed July 10, 2007; filed July 19, 2007 by the Appellant (acknowledged by the Examiner in the Advisory Action of July 24, 2007)

2. **The Grizenko Declaration**
   - By Alex Grizenko
   - Signed July 17, 2007; filed July 19, 2007 by the Appellant (acknowledged by the Examiner in the Advisory Action of July 24, 2007)

3. **www.costellos.com.au/diamonds/mining.html** (categorizing diamonds into "gem quality," "near-gem quality," and "industrial quality" diamonds)

4. **Photograph of gem quality diamonds produced according to the claims, using roses as the starting material**

5. **Photograph of industrial quality diamond produced according to Vilella Jirau.**

6. **The Hatleberg Declaration**
   - By John N. Hatleberg
   - Signed October 1, 2007; filed October 1, 2007 by the Appellant

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: John N. HATLEBERG	Confirmation No. 4007
Application No: 10/679,292	Group Art Unit: 3643
Filing Date: October 7, 2003	Examiner: Stuart L. Hendrickson
For: SYNTHETIC DIAMONDS PREPARED FROM ROSES	Atty. Docket No.: 81715-100

RULE 132 DECLARATION

Mail Stop: AF
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
Sir:

I, John King, hereby declare as follows:

1. I am a citizen of the United States of America residing at 8 Greene Street, New York, New York. I wish to submit information in support of the patentability of the claims of this application.

2. I am the technical director of the Gemological Institute of America's GIA Laboratory (the "GIA") in New York overseeing the diamond grading laboratory, having a Bachelor of Fine Arts degree in 1977 from Wayne State University and a Master of Fine Arts degree in 1982 from Hunter College, City University of New York. I have worked in the diamond field since 1978 and hold a Graduate Gemologist diploma from GIA. My work experience and areas of expertise include diamond grading, colored diamond color grading and diamond identification.

3. It has been one of the highest priorities of the GIA to stay abreast of any new developments concerning diamond treatments and synthesis. GIA's role is to ensure the public's trust in gems and jewelry through education, research and laboratory reporting. The

GIA has followed and reported on developments in the synthesis of diamond since at least 1971 when General Electric announced the creation of a one carat gem quality synthetic diamond. The GIA has pursued its own scientific research relating to synthetic diamonds in tandem with all principle manufacturers of synthetics including GE, Sumitomo and DeBeers. I believe it was for this reason that John Hatleberg, a friend of mine for the last 20 years, approached me privately several years ago to outline in confidence his work with his so-called Rose Diamonds. Recently he has shown me a number of samples of these new gems. The examples I observed were strongly saturated and brilliant pinks, yellows and reds. The appearance of synthetic diamonds is like that of natural diamonds. In fact, they are of the same composition as natural diamonds except they are laboratory grown.

4. Jewelry is one of mankind's earliest creations. The jewelry industry has a history of slow developments rather than sudden breakthroughs. Against this backdrop, my personal opinion, not representing those of the GIA, is that John Hatleberg has created gems that are truly novel. They are made from organic plant material and to my knowledge this has not been done before. More importantly, he has made a link between the symbolism of a gift such as roses with the permanence of a synthetic diamond. In his development of synthetic diamonds, he has seemingly completed the missing conceptual link by bringing the integral property of romance to them. For hundreds of years people have given diamonds for their incredible ability to symbolize love. Not until the invention of Rose Diamonds, have synthetic diamonds been able to also convey that symbolism.

5. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, and any patent issuing thereon.

Signed this 10th day of July 2007.

John King

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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RULE 132 DECLARATION

Mail Stop: AF
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
Sir:

I, Alex Grizenko, hereby declare as follows:

1. I am a citizen of Canada, US permanent resident, residing at 610 Lindsey Road, Golden, Colorado 80401, U.S.A. I wish to submit information in support of the patentability of the claims of this application.

2. I began experimenting in the field of synthetic diamonds in 1993, when I met several diamond scientists in Moscow and Novosibirsk, Russia. As president of several companies (Russian Colored Stone Company, Ultimate Created Diamonds, and since 2000 Lucent Diamonds), I was involved in every step of commercially introducing laboratory grown diamonds to the US marketplace in 1995. We have continued to perfect growth size, clarity and colors until the present day. During the first 6 years we received extensive trade media coverage at each introduction of a major new diamond fancy color. Over the years I have also been featured as an expert on synthetic diamonds on a NOVA production entitled "The Diamond Deception (2000), two BBC Horizon science programs entitle "The Diamond Makers Part 1 and 2", and several German and Russian science and news programs. My

company was also the original production facility for "LifeGem Memorial Diamonds, (lifegem.com)" until 2004.

For the past 14 years I have worked with some of the world's most brilliant diamond scientists, have learned the techniques of synthetic diamond growth, and have experienced a market's growing interest in synthetic diamonds. My formal academic experience includes a Bachelors of Science from McGill University, a Masters of Business Administration with a focus on Health Care from Duke University, and teaching experience at McMaster University and Rush University.

Our laboratory's work in growing diamonds as well as color enhancing natural origin diamonds has been a particular fascination with the diamond, gem and jewelry trade, and I have given over thirty lectures at: Gemological Institute of America (GIA) sponsored symposiums; Accredited Gemologist Association (AGA) meetings; and many gemological alumni association gatherings around the world. I have recently co-authored two papers on diamond enhancement models and diamond fancy color classification for at the GIA Research Conference of the 2006 GIA Symposium, and I have just accepted an invitation to address the European gemologists at the prestigious HRD Research Conference held in Antwerp, October 2007. I am currently the CEO of Lucent Diamonds and I oversee all phases of diamond product development, manufacture, marketing and sales. Many industry leaders have long presented me at trade functions as one of the few leaders in the field of synthetic diamonds

3. I am familiar with this patent application and the inventions disclosed therein, as well as with the final office action dated March 20, 2007, and understand that the claims have been rejected over US patent publication No. 2003/0017932 to VanderBeisen et al. (referred to hereafter as "VanderBeisen") and US patent No. 6,030,596 to Vilella Jirau (referred to hereafter as "Vilella Jirau"). I am making these statements to submit the views of a skilled artisan.

4. I have been a manufacturer of synthetic diamonds since 1994. Within that timeframe the quality of synthetic diamonds as regards size, color and clarity has improved significantly. Now that there is a beautiful product available to consumers, however, there has been and still is a stigma to purchase them. The public generally connotes the term

"synthetic" to mean fake or to be cubic zirconium. Thus, there is a need for raising the status of synthetic diamonds so that they will become accepted by consumers with more of them being sold.

5. I never considered the potential of using an organic plant material such as roses as a starting material to create diamonds. To my knowledge, such a material has never been used. What the inventor, John Hatleberg, has accomplished with this invention is to shift the onus of diamonds that are made from man into an attribute. It adds the missing link of the romance of diamonds to synthetic diamonds. Unlike other synthetic diamond producers he broadcasts that he is creating, not mining, diamonds. Only in this manner is it possible to have diamonds from roses. As noted, I have never seen this done before and believe that it represents a true improvement over the art in that it unexpectedly raises the level of consumer acceptance of such products.

6. The present inventor combines the symbolism of giving roses as a gift to symbolize love to giving diamonds to symbolize love. With this combination rose diamonds have the potential to be viewed as the most romantic diamonds in the world. This is true compared to both other synthetic diamonds and natural diamonds. In my view this is a significant and exciting accomplishment that will benefit both the consumers of such synthetic diamonds as well as the manufacturers.

7. VanderBeisen discloses a novel synthetic gem comprising elements recovered from complete or partial human or animal remains. The invention also includes the process of manufacturing synthetic gems comprising carbon from a vertebrate by cremating human or animal remains to produce carbon in a particulate and gaseous form. The carbon is then filtered using a conventional filtering technique. The carbon and other elements are then purified and graphitized using a Halogen Purification technique. The gems are then created using conventional sublimation techniques. The synthetic gems may be faceted and polished utilizing conventional faceting and polishing techniques. The gems may also utilize a conventional marking system. This patent is also not relevant to the present claims because it certainly does not enhance the perception of synthetic diamonds as does the present invention.

There is absolutely no connection between the use of such material to represent a gift nor is there any link between the starting material and the final diamond (i.e., temporal and permanent gifts). In contrast, the present invention has this link or connection between the concept of selecting a gift of flowers or other organic plant material and then converting the flowers into a diamond so that the gift is permanent. Certainly, cremated animal or human remains are not gifts, nor are they organic plant material as claimed.

8. Vilella Jirau discloses a method for making diamonds by heating a heterogeneous dispersion of carbon made by pyrolysis of organic material and copper metal in a convenient pressure vessel while maintained at a pressure of 100,000 psi. It is disclosed that the copper content of the reacting mass should be maintained within 15% of the total for best results. This patent is also not relevant to the present invention or its claims. Vilella Jirau simply relates to a method for synthesizing diamonds from carbon by utilizing copper as the solvent and carbon produced by the pyrolysis of an organic compound, such as a carbohydrate like household sugar, as the solute. Under laboratory conditions, in an assemblage where one of the parameters is an applied pressure of 100,000 pounds per square inch, copper behaves like a solvent which favors the crystallization of carbon into the cubic system well under the parameters of heat, pressure and time established by other patented processes or thermodynamic considerations. Like the present invention, this patent utilizes known process technology to manufacture synthetic diamonds, but uses sugar and copper to facilitate such manufacture. Vilella Jirau is not making gem quality synthetic diamonds for jewelry applications, but instead is creating industrial diamonds which are not of high clarity or beauty. The only similarity to the present invention is that carbon is pyrolyzed to form a carbon source that can then be made into a synthetic diamond. This patent does not recognize the symbolism of making a temporal gift permanent, and for that reason does not use a starting material that is a gift or that would be considered as a gift that manifests the feeling of the giver towards the recipient.

9. The Examiner also believes that the inventor's alleged admissions suggest that the invention is unpatentable. I disagree with this statement. While it is true that the basic knowledge for making synthetic diamonds from graphitized material exists, there is no

making gem quality synthetic diamonds that embody the gift and that have a color that represents to color of the gift. This can be achieved by adding trace elements or dopants to the graphite powder of the organic plant material or by interference of the crystal lattice. This enables the synthetic diamond to be formed with a color that is the same as that of the flowers that were given as a gift. This creates a connection and more complete remembrance of the gift by the recipient. Thus, the symbolism of a red diamond as representing a gift of red roses creates further importance and significance to the diamond. I have never seen this connection prior to becoming aware of the present invention.

10. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, and any patent issuing thereon.

Signed this 17th day of July 2007.

Alex Grizenko

Category diamonds

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MINING DIAMONDS

Of all the diamonds mined in the world each year, less than half are gem quality; the rest fall into two other main categories known as near-gem quality and industrial quality diamonds.

Gem quality diamonds display a high standard of excellence in quality and are used in jewellery. The clarity of these diamonds ranges from flawless through to visible inclusions.

Near-gem quality diamonds represent those stones of a quality between gem and industrial, that in fact can be used as either depending on the individual stone. These stones have clarity grades ranging from visible inclusions through to industrial.

Industrial quality diamonds are low quality or badly included stones and are suitable only for industrial use; for example, they are used in dentist's drills and earthmoving equipment.

Diamond Mining

Diamonds are recovered by way of pipe or alluvial mining.

Pipe Mining

Pipe mining refers to the extraction of diamonds from volcanic pipes. Typically, a very large area has to be covered. An average of 250 tonnes of ore must be mined in order to produce a one-carat gem quality polished diamond.

In most countries, a diamond pipe mine is composed of kimberlite, or blue ground. Initially kimberlite is dug from the surface of the pipes in rough opencast mining. Once the surface deposits have been exhausted, shafts are sunk into the ground at the edge of the pipes, and tunnels are driven into the deeper parts of the pipes. After the diamond-bearing rock is brought to the surface, it is then transported to a screening plant where the diamonds are separated from the host rock.

Alluvial Mining

This process involves the extraction of diamonds from riverbeds or ocean beaches. Millions of years ago, at the time the diamond pipes were formed, some diamonds were weathered out of the pipes and carried great distances along rivers and even into oceans.

In order to extract these diamonds from beaches, a wall is built to hold back the surf. Up to 25 metres of sand is bulldozed aside to reach the diamond-bearing level. Once reached, the diamond-bearing earth is removed and transported to screening plants.

Diamond Cutting and Polishing

The history of diamond cutting and polishing has its origins in India, where it was discovered a long time ago by Indian lapidaries that a diamond could be made to glisten simply by grinding another diamond against it.

Nowadays the diamond and its powder play an important role in the cutting and polishing of diamonds. Over time modern machinery has replaced traditional diamond cutting tools.

Diamond cutting and polishing requires anywhere from several hours to several months to complete. During this process, a diamond will lose on average half of its original weight.

Diamond Cutting

As every diamond is different, a stone must first be carefully examined by the cutter and then marked for cutting. Of all the cuts, the most popular is the round brilliant because of its ability to give a stone the greatest possible brilliance and fire with the most minimal amount of weight loss. The following cutting and polishing procedures uses the round brilliant cut as an example.

The rough diamond is divided into two parts by sawing or cleaving. Most stones are sawn across the "grain" (visible evidence of the diamond's crystal structure) by a paper-thin metal disc coated with diamond dust revolving at high speed or by laser. The stones that are marked for cleaving are split along the grain by a single blow from a steel blade.

After cleaving or sawing, the corners of the diamond are rounded off by a process known as bruting or girdling (only round brilliant cuts require this step). The stone is cemented into a "lathe", a holder that fits on a turning shaft. Another diamond is cemented to the end of a long rod held under the bruter's arm. As the lathe rotates, the two diamonds are brought together and grinded to shape. Diamond dust is produced from this action and is used in further sawing and faceting.

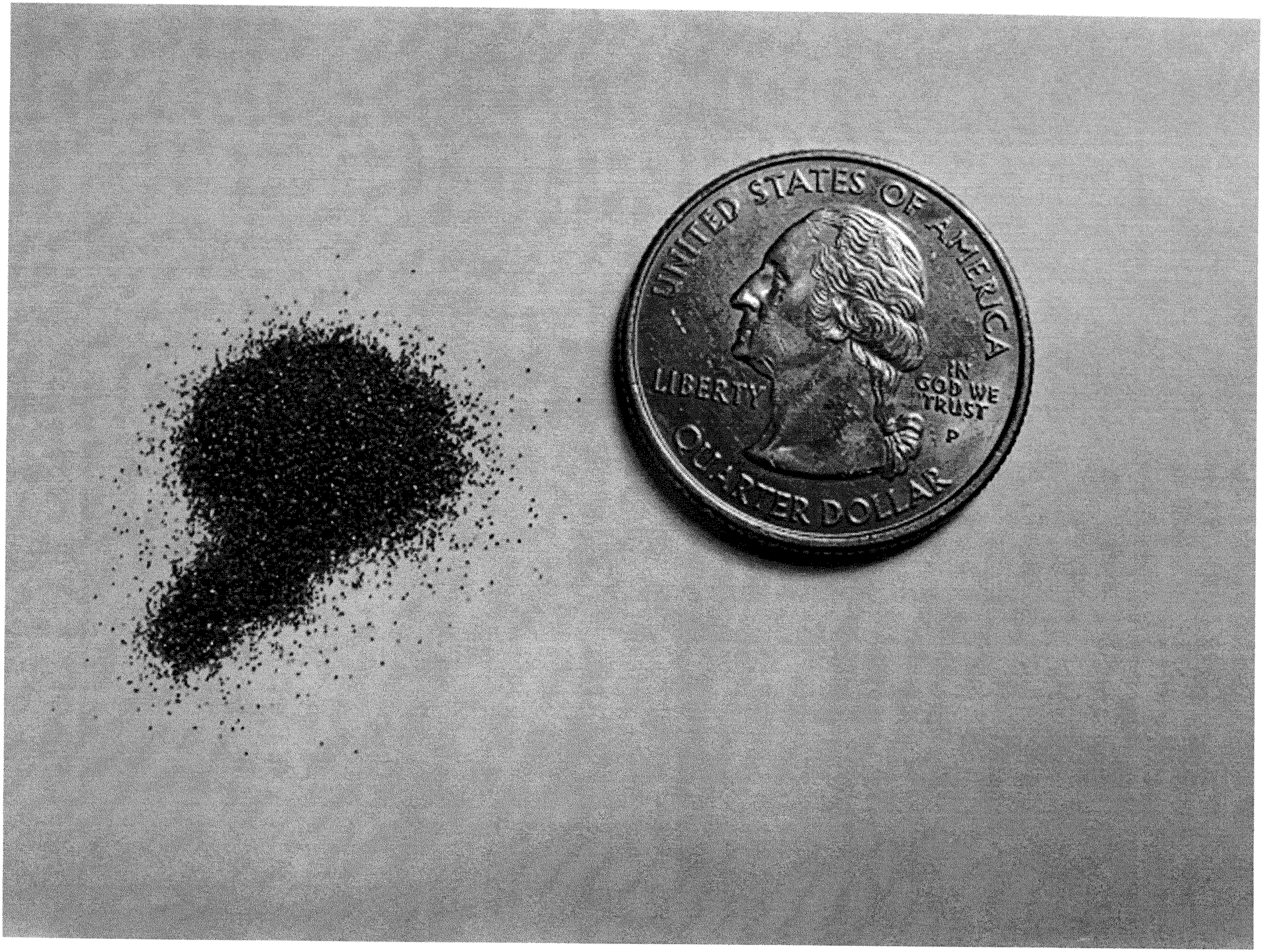
The brilliant now has a girdle-a sort of rim at the widest part by which it is usually set. The size or position of the girdle should not change throughout the rest of the diamond cutting process.

Diamond Polishing

The polishing of the diamond begins; one by one, facets will be ground on to the stone. A facet is the tiny plane or surface that traps the light and makes a diamond sparkle. Most diamond cuts have 58 facets.

The facets are applied to the diamond on a "turntable", made of porous iron, which has been coated with diamond dust and oil. The diamond is set into a holder and held against the turntable as it revolves at a very high speed.

A diamond has been cut well when its facets are clean, sharp, and symmetrical, and the proportions above and below the girdle are correct. A diamond is correctly proportioned when one-third of the total weight of the gem is above the girdle and two thirds below. A well-cut diamond will be fiery, brilliant and beautiful.



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: John N. HATLEBERG	Confirmation No. 4007
Application No: 10/679,292	Group Art Unit: 3643
Filing Date: October 7, 2003	Examiner: Stuart L. Hendrickson
For: SYNTHETIC DIAMONDS PREPARED FROM ROSES	Atty. Docket No.: 81715-100

DECLARATION UNDER 37 C.F.R. § 1.132 OF JOHN N. HATLEBERG

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

I, John N. Hatleberg, hereby declare as follows:

1. I am a citizen of United States residing at 1016 Fifth Avenue, New York, NY 10028. I am the inventor of this application. I have a B.A., *cum laude*, in Fine Arts and Prelaw conferred from Wesleyan University in 1979 and an M.A. in Sculpture conferred from Cranbrook Academy of Art in 1982. Since 1982, I have been a sculptor, painter, conceptual artist, and gem cutter working with jewels. Since 1988, I have been primarily known as the gem cutter who facets the premier replicas of famous diamonds in the world. In this capacity, I have worked with the Smithsonian Institution, the Tower of London, the Government of South Africa, De Beers, Cartier, Harry Winston, Chopard, and numerous private jewel houses worldwide. My artwork has been exhibited at the American Museum of Natural history, the Royal Ontario Museum, the Chicago Field Museum, the L.A. County Museum of Natural History, the Tokyo Science Museum, the Natural History Museum of London, the Carnegie Mellon Museum, and others. My work is owned by the Smithsonian Institution and the Mikimoto Museum. I have served as consultant to the book *Famous Diamonds* published by Christie's, and my work is

included in the book *20th Century Jewelry* by Christie's. I have lectured numerous times for Sotheby's, the Gemological Institute of America, and the Gemological Association of Great Britain. I am submitting the following statements in support of the patentability of the claims of this application.

2. I have reviewed and am familiar with the final Office Action mailed March 20, 2007, the references cited in the Office Action, including U.S. Patent Publication No. 2003/0017932 to VandenBiesen et al. and U.S. Patent No. 6,030,596 to Vilella Jirau ("Vilella Jirau"), and the Appeal Brief submitted concurrently herewith. I am making the following statements as one of ordinary skill in the art of synthetic diamond manufacturing in support of patentability of the claims in this application.

3. Vilella Jirau is directed to a specific method for synthesizing diamonds by heating a heterogeneous dispersion of carbon made by pyrolysis of organic material and copper metal under a pressure of 100,000 psi. Based on the disclosed process parameters, including the temperature, pressure, and time of manufacture, it would not be possible to produce gem quality diamonds by the process of Vilella Jirau. Vilella Jirau would at most produce industrial quality diamond particles that are small and discolored and have inclusions. Compared to gem quality diamonds, industrial quality diamonds exhibit significantly inferior quality, including inferior clarity and color and smaller crystal size, and are used for industrial applications, such as abrasive material.

4. The photograph submitted herewith, showing a sample of industrial diamonds next to a quarter coin, is an accurate reproduction of diamonds that would be produced according to Vilella Jirau. As is evident from the photograph, the industrial quality diamond particles are darker in color than the coin, and are substantially and significantly different, in clarity, color, and crystal size, from the gem quality diamonds produced according to the methods of this application. A photograph of gem quality diamonds of the present application is attached for comparison.

5. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, and any patent issuing thereon.

Signed this 1 day of October 2007.

John N. Hatleberg

Appendix C -- Related Proceedings Appendix

None